

The Examiner's Position

The Examiner asserts on page 3, third paragraph, of the Office Action:

*"it would have been obvious to a person of ordinary skill in the art at the time of this invention made to utilize disclosure of Fukatani et al and Coaker et al in the invention of Fisher et al to disperse LaB<sub>6</sub>, ITO and/or ATO in a plasticizer containing phosphoric acid ester compound as dispersion stabilizer to prevent haze and for compatibility."*

Based on the following, Applicant contends that the Examiner's position is not supportable, thereby making the presently claimed invention unobvious over the cited references.

Applicant's Position

The presently claimed invention is directed to a color interlayer film for laminated glass, which comprises a resin composition containing a polyvinyl acetal resin, a coloring agent, and an infrared ray shielding agent. The resin composition further contains a phosphoric acid ester compound selected from the group consisting of a trialkyl phosphate, a trialkoxyalkyl phosphate, a triaryl phosphate and an alkyl aryl phosphate at a ratio of 5 parts by weight or less to 100 parts by weight of the polyvinyl acetal resin.

As indicated in MPEP § 2143, the Examiner must resolve the factors described in *Graham v. John Deere*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), which provides the controlling framework for an obviousness analysis, before utilizing the rationales that were established in *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007).

Differences between the Invention and the Cited References

Applicant provides the following information regarding the *Graham* factor of ascertaining the differences between the prior art and the claims that are at issue.

Fisher

As the Examiner acknowledges on page 2 (line 4 from the bottom) of the Office Action, the Fisher reference fails to disclose the use of the claimed phosphoric acid ester as a dispersion stabilizer.

Fukatani

The Fukatani reference discloses in paragraph [0096] that:

*"...the plasticized polyvinylacetal resin composition further contains a dispersion stabilizer. The dispersion stabilizer...may, for example, include organic...surfactant.... For example, at least one kind of compound selected from the group consisting of...phosphate ester compound...is suitably employed" (emphasis added).*

Fukatani further discloses in paragraph [0097]:

*"The content of the dispersion stabilizer is preferably 0.0005 to 5.0 parts by weight per 100 parts by weight of the polyvinylacetal resin." (Emphasis added).*

However, Fukatani specifically discloses only a polyphosphate salt as a dispersion stabilizer in the Examples (See Fukatani, paragraph [0127], lines 3-5, paragraph [0157], lines 3-5, paragraph [0167], lines 3-5, and paragraph [0190], lines 1-4). Applicant also notes that the polyphosphate salt is different from a trialkoxyalkyl phosphate, an alkyl aryl phosphate and a trialkyl phosphate as recited in claim 1 of the presently claimed invention.

Thus, Fukatani does not specifically disclose a trialkoxyalkyl phosphate, an alkyl aryl phosphate or a trialkyl phosphate as a dispersion stabilizer.

Coaker

The Coaker reference discloses a phosphate acid ester compound as recited in claim 1 as a plasticizer (see Coaker, column 2, line 12, to column 3, line 6).

Coaker further discloses in column 10, lines 4-8:

*The present invention also contemplates the use of various adjuncts and additives in the plasticized polyvinyl butyral interlayers of the present invention. Such materials would include dyes, pigments, stabilizers, antioxidants, titer control agents, adhesion modifiers, etc."*

However, the Coaker reference is silent concerning an infrared ray shielding agent such as LaB<sub>6</sub>, ITO and ATO.

Thus, Applicant submits that one of ordinary skill in the art would not be directed to the use of a phosphate acid ester compound (as recited in claim 1) as a dispersion stabilizer for an infrared ray shielding agent such as LaB<sub>6</sub>, ITO and ATO from the disclosures of the Coaker reference.

Therefore, the above cited references do not teach or suggest the use of a phosphate acid ester compound as a dispersion stabilizer for an infrared ray shielding agent (such as LaB<sub>6</sub>, ITO and ATO), as recited in claim 1.

Applicant submits that based on the differences discussed above, the Examiner has not resolved the *Graham* factor of ascertaining the differences between the prior art and the claims at issue, and therefore the rationale the Examiner provides for the cited rejection is improper.

Applicant submits that the differences between Fisher, Fukatani, Coaker and the presently claimed invention are evident. Applicant notes that although the above comments discuss Fisher, Fukatani, and Coaker individually, this was only for discussing these references in terms of the *Graham* factor analysis. Applicant submits that taking the above *Graham* analysis in mind, Fisher, in view of Fukatani and Coaker do not lead to the presently claimed invention.

That is, it would not have been obvious to one of ordinary skill in the art to utilize the disclosures of Fukatani and Coaker in the Fisher invention to disperse an infrared ray shielding agent such as LaB<sub>6</sub>, ITO and ATO.

In light of the above remarks, Applicant submits that the assertions made by the Examiner regarding the cited references are incorrect, thus failing to support the Examiner's position. Accordingly, based on the differences between the presently claimed invention and Fisher, in view of Fukatani and Coaker, these references do not teach or suggest the presently claimed invention.

The secondary references, Fukatani and Coaker, fail to remedy the deficiencies of the Fisher reference, outlined above.

Since claim 1 is not obvious to one of ordinary skill in the art, claims 3-5, 7, 9 and 10, which ultimately depend from claim 1, are unobvious over Fisher, in view of Fukatani and Coaker for the same reasoning discussed above.

Applicant respectfully requests reconsideration and withdrawal of the rejection.

### **Conclusion**

Applicant respectfully submits that the rejection raised by the Examiner has been overcome, and that the present application now stands in condition for allowance.

Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Paul D. Pyla at the telephone number below, in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized to charge payment or credit any overpayment to Deposit Account No. 23-0975 for any additional fees required under 37 C.F.R. §§1.16 or 1.17.

Respectfully submitted,

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